

The Learning Impact of a 4-Dimensional Digital Construction Learning Environment

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Abstract : This paper addresses a virtual environment approach to work integrated learning for students in construction-related disciplines. The virtual approach provides a safe and pedagogically rigorous environment where students can apply theoretical knowledge in a simulated real-world context. The paper describes the development of a 4-dimensional digital construction environment and associated learning activities funded by the Australian Office for Learning and Teaching. The environment was trialled with over 1,300 students and evaluated through questionnaires, observational studies and coursework analysis. Results demonstrate a positive impact on students' technical learning and collaboration skills, but there is need for further research in relation to critical thinking skills and work-readiness.

Keywords : architectural education, construction industry, digital learning environments, immersive learning

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